

IN THE CLAIMS

1. (Currently amended) A base station for use in a code division multiple access wireless communication system, comprising:

a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals assigned to multiple carriers and multiple antenna sectors of the communication system, wherein ~~each of at least a non-empty subset~~ a given one of the channel elements of ~~at least one of the channel unit boards~~ is assignable to each of a plurality of carriers and a plurality of antenna sectors of the system.

2. (Original) The base station of claim 1 wherein each of the channel unit boards generates a set of digital in-phase (I) and quadrature (Q) signals for each of the plurality of carriers.

3. (Original) The base station of claim 2 wherein at least one of the channel unit boards includes a multiplexer operative to connect a given one of the channel elements to an I and Q signal bus associated with a given one of the plurality of carriers.

4. (Original) The base station of claim 3 wherein the I and Q signals generated for a given one of the carriers by a given one of the channel unit boards is combined within another of the channel units boards with the I and Q signals generated for the given carrier by the other channel unit board.

5. (Original) The base station of claim 1 wherein each of at least a subset of the channel unit boards includes a total of N channel elements, and each of the channel elements may be assigned to one of up to N carriers of the system.

6. (Original) The base station of claim 1 further including a control computer operative to generate one or more control signals for controlling assignment of the channel elements of the channel unit boards to the plurality of carriers of the system.

7. (Previously presented) The base station of claim 1 wherein the code division multiple access wireless communication system is operative in accordance with at least one of an IS-95A standard, an IS-95B standard, an IS-95C standard with Orthogonal Transmit Diversity (OTD), an IS-95C standard without OTD, a Multi-Carrier (MC) cdma2000 standard, and a Universal Mobile Telecommunications System (UMTS) standard.

8. (Currently amended) A method of implementing a base station for use in a code division multiple access wireless communication system, the base station comprising a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals assigned to a plurality of carriers and a plurality of antenna sectors of the communication system, the method comprising the step of:

controllably assigning the channel elements of at least one of the channel unit boards to designated ones of the plurality of carriers and the plurality of antenna sectors of the system, such that different channel elements of the channel unit board are assigned to different carriers and different antenna sectors of the system;

wherein a given one of the channel elements of the channel unit board is assignable to each of the plurality of carriers and the plurality of antenna sectors of the system.

9. (Original) The method of claim 8 wherein each of the channel unit boards generates a set of digital I and Q signals for each of the plurality of carriers.

10. (Original) The method of claim 9 wherein at least one of the channel unit boards includes a multiplexer operative to connect a given one of the channel elements to an I and Q signal bus associated with a given one of the plurality of carriers.

11. (Original) The method of claim 10 wherein the I and Q signals generated for a given one of the carriers by a given one of the channel unit boards is combined within another of the channel unit boards with the I and Q signals generated for the given carrier by the other channel unit board.

12. (Original) The method of claim 8 wherein each of at least a subset of the channel unit boards includes a total of N channel elements, and each of the channel elements may be assigned to one of up to N carriers of the system.

13. (Original) The method of claim 8 wherein the assigning step is implemented at least in part using a control computer operative to generate one or more control signals for controlling assignment of the channel elements of the channel unit boards to the plurality of carriers of the system.

14. (Previously presented) The method of claim 8 wherein the code division multiple access wireless communication system is operative in accordance with at least one of an IS-95A standard, an IS-95B standard, an IS-95C standard with OTD, an IS-95C standard without OTD, an MC cdma2000 standard, and a UMTS standard.

15. (Currently amended) An article of manufacture comprising a machine-readable storage medium for storing one or more programs for use in configuring a base station of a code division multiple access wireless communication system, the base station comprising a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals assigned to multiple carriers and multiple antenna sectors of the communication system, the one or more programs when executed implementing the step of:

controllably assigning the channel elements of at least one of the channel unit boards to designated ones of the plurality of carriers and the plurality of antenna sectors of the system, such that different channel elements of the channel unit board are assigned to different carriers and different antenna sectors of the system;

wherein a given one of the channel elements of the channel unit board is assignable to each of the plurality of carriers and each of the plurality of antenna sectors of the system.

16. (Currently amended) A base station for use in a code division multiple access wireless communication system, comprising:

a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals assigned to multiple carriers and multiple antenna sectors of the communication system, wherein ~~each of at least a non-empty subset~~ a given one of the channel elements of ~~at least one of the channel unit boards~~ is assignable to each of a plurality of carriers and a plurality of antenna sectors of the system; and

a control computer coupled to ~~at least a non-empty subset of the plurality of channel unit boards~~, the control computer being operative to assign the channel elements of the channel unit boards to particular ones of the carriers and antenna sectors of the system.

17. (Currently amended) A base station for use in a code division multiple access wireless communication system, comprising:

a plurality of channel elements for providing processing operations for signals assigned to multiple carriers and multiple antenna sectors of the communication system; and

a multiplexer operative to assign signals from ~~at least a non-empty subset~~ a given one of the channel elements to each of a plurality of carriers and a plurality of antenna sectors of the system, so as to implement a multi-carrier multi-sector channel pooling arrangement.

18. (Currently amended) A method of implementing a base station for use in a code division multiple access wireless communication system, the base station comprising a plurality of channel elements for providing processing operations for signals assigned to a plurality of carriers and a plurality of antenna sectors of the communication system, the method comprising the step of:

controllably assigning the channel elements to designated ones of the plurality of carriers and the plurality of antenna sectors of the system, so as to implement a multi-carrier multi-sector channel pooling arrangement;

wherein a given one of the channel elements is assignable to each of the plurality of carriers and the plurality of antenna sectors of the system.

19. (Currently amended) A base station for use in a code division multiple access wireless communication system, comprising:

a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals transmitted by the system; and

a controllable signal combiner element coupled to ~~at least a non-empty subset of the~~ plurality of channel unit boards;

wherein the controllable signal combiner element implements an assignment of signals from each of ~~at least a non-empty subset of~~ the channel elements of a given one of the channel unit boards for transmission on one or more of a plurality of carriers and a plurality of antenna sectors of the system;

wherein a given one of the channel elements of the given channel unit board is assignable to each of the plurality of carriers and the plurality of antenna sectors of the system.

20. (Previously presented) The base station of claim 19 wherein the controllable signal combiner element further comprises:

a set of controllable signal combiners associated with a given one of the channel unit boards and each having a plurality of inputs, with each of the inputs coupled to an output of a particular one of the plurality of channel elements of the given channel unit board; and

a multi-carrier combiner having a plurality of inputs, with each of the inputs coupled to an output of a corresponding one of the controllable signal combiners, the multi-carrier combiner further having an additional input coupled to a bus output of another of the plurality of channel unit boards, and generating a set of outputs on a system transmit bus.

21. (Previously presented) The base station of claim 19 wherein each of the channel unit boards generates a set of digital in-phase (I) and quadrature (Q) signals for each of the plurality of carriers.

22. (Previously presented) The base station of claim 19 wherein each of at least a subset of the channel unit boards includes a total of N channel elements, and each of the channel elements may be assigned to one of up to N carriers of the system.

23. (Previously presented) The base station of claim 19 further including a control computer operative to generate one or more control signals for application to the controllable signal combiners and the multi-carrier combiner so as to control assignment of each of at least a subset of the channel elements of the given channel unit board to one or more of the plurality of carriers of the system.

24. (Currently amended) A base station for use in a code division multiple access wireless communication system, comprising:

a plurality of channel unit boards each including a plurality of channel elements for providing processing operations for signals received by the system; and

a controllable selector associated with a given one of the channel unit boards and receiving as inputs a set of signals associated with a receive bus of the system, the controllable selector having a plurality of outputs, each coupled to a corresponding input of one of the channel elements of the given channel unit board;

wherein the controllable selector implements an assignment of received signals from each of a plurality of carriers and a plurality of antenna sectors of the system to ~~each of at least a non-empty subset~~ one or more of the channel elements of the given channel unit board;

wherein a given one of the channel elements of the given channel unit board is assignable to each of the plurality of carriers and the plurality of antenna sectors of the system.

25. (Previously presented) The base station of claim 24 wherein each of the channel unit boards processes a set of digital in-phase (I) and quadrature (Q) signals for each of the plurality of carriers.

26. (Previously presented) The base station of claim 24 wherein each of at least a subset of the channel unit boards includes a total of N channel elements, and each of the channel elements may be assigned to one of up to N carriers of the system.

27. (Previously presented) The base station of claim 24 further including a control computer operative to generate one or more control signals for application to the controllable selector so as to

control assignment of the received signals from each of the plurality of carriers of the system to each of at least a subset of the channel elements of the given channel unit board.